

ABSTRACT OF THE DISCLOSURE

An emitter array produced using etch mask and a method for making such an etch mask. The emitter comprising a substrate, forming a conducting layer on the substrate, forming an emitting layer on the conducting layer, forming an etch mask having a controlled distribution of a plurality of mask sizes over the emitting layer, and forming at least one emitter by removing portions of the emitting layer using the etch mask. The method for making the etch mask comprising forming an etch mask layer over an emitting layer, forming a patterning layer having a controlled distribution of mask sizes over the etch mask layer, and forming the etch mask by removing portions of the etch mask layer using the controlled distribution of mask sizes in the patterning layer.

N:\2269\3444.3\DIV.PAT.APP.DOC 10/01/03